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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/764,481	01/27/2004	Satoshi Hiyama	010755.53179US	6283

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CROWELL & MORING LLP  
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EXAMINER
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MAIS, MARK A

ART UNIT	PAPER NUMBER
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2616

MAIL DATE	DELIVERY MODE
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06/26/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/764,481

Applicant(s)

HIYAMA ET AL.

Examiner

Mark A. Mais

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 1/27/04; 7/30/04; 4/23/07.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Priority***

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d).

### ***Information Disclosure Statement***

2. The information disclosure statements (IDSs) were filed on January 27, 2004, July 30, 2004, and April 23, 2007. The submissions are in compliance with the provisions of 37 C.F.R. 1.97. According, the examiner considered the IDSs.

### ***Specification***

3. The abstract of the disclosure is objected to because it contains words typed together without appropriate spacing (e.g., lines 1, 9, and 15). Correction is required. See MPEP § 608.01(b).
4. The disclosure is objected to because of the following informalities: words typed together without appropriate spacing (e.g., page 1, lines 23 and 25). Appropriate correction is required.
5. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors (i.e., words typed together without appropriate spacing).

Art Unit: 2616

Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Leung (USP 6,636,498).

8. With regard to claim 1, Leung discloses a mobile communication system wherein a mobile router moving with mobile nodes performs location update of the mobile nodes on behalf of the mobile nodes; the mobile communication system comprising:

Art Unit: 2616

means for retaining a flag indicating whether the mobile router is active or not **[in the registration REQUEST, the D bit informs the home agent which entity is performing the decapsulation, col. 12, lines 17-18; interpreted as whether a mobile router is active or not] ;**

means for inquiring about routing address information for the mobile router based on the value of the retained flag when paging is performed to the mobile node **[in the registration REQUEST (the interpreted as an inquiry) the D bit is set to indicate whether the mobile router is in the home network (i.e., collocated care-of-address) or it is using a foreign agent's care-of-address, col. 12, lines 18-20]; and**

means for performing paging to the mobile node using the obtained routing address information as a result of the inquiry **[the type field identifies the registration REPLY as a result of the registration REQUEST, col. 12, lines 9-10; interpreted as an the reply (result) to the inquiry].**

9. With regard to claim 2, Leung discloses means for setting the flag to a value indicating an active state in response to a signal sent from the mobile node and indicating start of communication **[in the registration REQUEST, the S bit is set to create a binding for a care-of-address, col. 12, lines 10-13; interpreted as an active state], and**

setting the flag to a value indicating a dormant state in response to a signal sent from the mobile node and indicating end of communication **[in the registration REQUEST, the S bit is set to delete a binding for a care-of-address, col. 12, lines 10-13; interpreted as a dormant state].**

Art Unit: 2616

10. With regard to claim 3, Leung discloses a mobile communication system wherein a mobile router moving with mobile nodes performs location update of the mobile nodes on behalf of the mobile nodes; the mobile communication system comprising:

a routing manager **[home agent]** comprising:

a table for storing routing address information for the mobile router **[home agent creates and deletes bindings for specified care-of addresses, col. 12, lines 10-13; using mobility binding table, col. 7, lines 31-34]** ; and

means for, when the routing address information for the mobile router in the table is updated, notifying the updated routing address information **[home agent creates and deletes bindings for specified care-of addresses, col. 12, lines 10-13; using mobility binding table, col. 7, lines 31-34; the creating/deleting of bindings is interpreted as the notification of the updates using registration REQUEST/REPLY]**; and

a location manager **[foreign agent]** comprising:

a table for storing the routing address information notified by the routing manager as location area information for the mobile router **[Foreign Agent maps connectivity to mobile networks through the mobile router, col. 12, lines 58-59; using the visitor table, col. 12, lines 59-67]**; and

means for performing paging to the mobile node using the location area information stored in the table **[the type field identifies the registration REPLY as a result of the registration REQUEST, col. 12, lines 9-10; interpreted as an the reply (result) to the inquiry; thus, the subsequent transmitted packets (e.g., paging) can be**

**decapsulated and forwarded (to the mobile station) by the Foreign Agent, col. 14, lines 30-40 ].**

11. With regard to claim 4, Leung discloses a location manager **[foreign agent]** wherein a mobile router moving with mobile nodes performs location update of the mobile nodes on behalf of the mobile nodes; the location manger comprising:

means for retaining a flag indicating whether the mobile router is active or not **[in the registration REQUEST, the D bit informs the home agent which entity is performing the decapsulation, col. 12, lines 17-18; interpreted as whether a mobile router is active or not];**

means for inquiring about routing address information for the mobile router based on the value of the retained flag when paging is performed to the mobile node **[in the registration REQUEST (the interpreted as an inquiry) the D bit is set to indicate whether the mobile router is in the home network (i.e., collocated care-of-address) or it is using a foreign agent's care-of-address, col. 12, lines 18-20];** and

means for performing paging to the mobile node using the routing address information obtained as a result of the inquiry **[the type field identifies the registration REPLY as a result of the registration REQUEST, col. 12, lines 9-10; interpreted as an the reply (result) to the inquiry].**

12. With regard to claim 5, Leung means for setting the flag to a value indicating an active state in response to a signal sent from the mobile node and indicating start of communication **[in the**

Art Unit: 2616

registration REQUEST, the S bit is set to create a binding for a care-of-address, col. 12, lines 10-13; interpreted as an active state], and

setting the flag to a value indicating a dormant state in response to a signal sent from the mobile node and indicating end of communication [in the registration REQUEST, the S bit is set to delete a binding for a care-of-address, col. 12, lines 10-13; interpreted as a dormant state].

13. With regard to claim 6, Leung discloses a location manager **[foreign agent]** wherein a mobile router moving with mobile nodes performs location update of the mobile nodes on behalf of the mobile nodes, the location manger comprising:

a table for storing routing address information for the mobile router, which is notified whenever the routing address is updated, as location area information for the mobile router **[Foreign Agent maps connectivity to mobile networks through the mobile router, col. 12, lines 58-59; using the visitor table, col. 12, lines 59-67]; and**

means for performing paging to the mobile node using the location area information stored in the table **[the type field identifies the registration REPLY as a result of the registration REQUEST, col. 12, lines 9-10; interpreted as an the reply (result) to the inquiry; thus, the subsequent transmitted packets (e.g., paging) can be decapsulated and forwarded (to the mobile station) by the Foreign Agent, col. 14, lines 30-40 ].**

Art Unit: 2616

14. With regard to claim 7, Leung discloses a routing manager **[home agent]** used for a mobile communication system wherein a mobile router moving with mobile nodes performs location update of the mobile nodes on behalf of the mobile nodes; the routing manager comprising:

a table for storing routing address information for the mobile router **[home agent creates and deletes bindings for specified care-of addresses, col. 12, lines 10-13; using mobility binding table, col. 7, lines 31-34];**

means for replying the routing address information stored in the table in response to an inquiry about the routing address information for the mobile router **[home agent creates and deletes bindings for specified care-of addresses, col. 12, lines 10-13; using mobility binding table, col. 7, lines 31-34; the creating/deleting of bindings is interpreted as the reply to the inquiry].**

15. With regard to claim 8, Leung discloses a routing manager **[home agent]** used for a mobile communication system wherein a mobile router moving with mobile nodes performs location update of the mobile nodes on behalf of the mobile nodes; the routing manager comprising:

a table for storing routing address information for the mobile router **[home agent creates and deletes bindings for specified care-of addresses, col. 12, lines 10-13; using mobility binding table, col. 7, lines 31-34];**

means for, when the routing address information for the mobile router in the table is updated, notifying the updated routing address information **[home agent creates and deletes bindings for specified care-of addresses, col. 12, lines 10-13; using mobility binding table,**

Art Unit: 2616

**col. 7, lines 31-34; the creating/deleting of bindings is interpreted as the notification of the updates using registration REQUEST/REPLY].**

### ***Conclusion***

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

(a) Lim (USP 6,697,355), Method and apparatus for communication using mobile internet in a mobile communication network.

(b) Korus et al. (USP 6,721,297), Method and apparatus for providing IP mobility for mobile networks.

(c) Moon et al. (USP 6,961,573), System and method for routing communications based on wireless communication link quality.

(d) Hanson et al. (USP 7,136,645), Method and apparatus for providing mobile and other intermittent connectivity in a computing environment.

(e) Moon et al. (USP 7,146,186), System and method for routing communications based on wireless communication link quality.

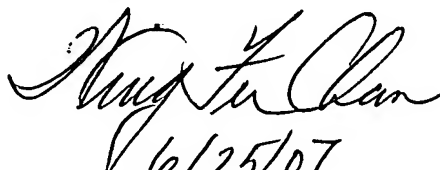
Art Unit: 2616

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark A. Mais whose telephone number is 572-272-3138. The examiner can normally be reached on M-Th 5am-4pm.

18. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chan F. Wing can be reached on 571-272-7493. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

19. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MAM  
June 15, 2007

  
6/25/07  
WING CHAN  
SUPERVISORY PATENT EXAMINER